

### **REMARKS**

The Official Action of October 13, 2009, and the prior art relied upon therein, have been carefully reviewed. The claims in the application, including those presently withdrawn, remain as claims 1-15, and these claims are respectfully submitted to define patentable subject matter warranting their allowance. Accordingly, rejoining of the withdrawn claims, and favorable reconsideration and allowance of the rejected claims, are respectfully requested. Applicants respectfully submit that their claims define patentable subject matter and should be allowed, and such is respectfully requested.

Acknowledgement by the PTO of the receipt of Applicants' papers filed under §119 is noted with thanks.

The restriction requirement has been repeated and made final. Applicants respectfully maintain their position that unity of invention exists and the requirement should not have been made, whereby the withdrawn claims should now be rejoined.

Respectfully, Applicants have difficulty understanding the Examiner's position in the second paragraph on page 2. It is the generic claims themselves which provide the linkage among the groups, and at least the Group I claims 1 and 2 should be rejoined with the elected claims 3-10 and 13-15. The common subject matter between the two groups, providing unity of invention, is the composition of claim 1 which is "for coating" according to Group I and has already been "coated" on a substrate in the Group II claims.

Applicants again respectfully request that claims 1 and 2 be rejoined and examined, and allowed for the reasons pointed out below.

The Examiner has suggested that Applicants follow the guidelines for the specification, including the headings and the location for the brief description of drawings.

In deference to the Examiner's views, appropriate headings have been inserted above and the description of the drawings has been moved from page 9 (with the text on page 9 having now been deleted) to its preferred location following the Brief Summary of the Invention.

The specification has been objected to with regard to not all of the abbreviations having been identified. Appropriate amendments have been made above with regard to the abbreviations AFM, XPS, SEM and TEM, these being common and well known abbreviations.

ABCR is the name of a German company that produces specialty chemicals for research, development and production (see their website at <http://www.abcr.de>). There is no other denomination for this company.

As regards MPPS, this is the terminology for the polysiloxane coating as prepared in Example 1 (page 11) and mentioned at page 5 of the Specification where the MPPS designation has now been inserted at the end of the second paragraph on page 5.

Withdrawal of the objection is in order and is respectfully requested.

Claims 3-10 and 13-15 have been rejected under the second paragraph of §112. This rejection is respectfully traversed.

First, "lower alkyl" is not indefinite. It has repeatedly been held, if not elsewhere defined, as constituting 1-6 carbon atoms. In the present application, it is actually defined in the third from last paragraph on page 4 of the specification. In deference to the Examiner's views, claim 1 has been amended to delete the offending language, there of course being no change in scope.

As regards lines 20, 23 and 25 of claim 1 as amended in the preliminary amendment, the expression "hydrolysable group, optionally a halogen or an alkoxy group" has been replaced with "hydrolysable group which is one or more of a halogen or an alkoxy group." which was in any event meant as should be clear from Applicants' specification at page 4, second paragraph from the bottom.

With respect to n and m and the proviso at lines 23 and 25, because the text can be interpreted so broadly as to be redundant, such text has now been deleted.

As regards claim 6, the criticized language has been deleted.

As regards claim 9, the word “average” has been inserted between the words “mean” and “layer”. Frankly, Applicants do not understand why the expression “mean layer thickness” would be considered unclear. Any measurement of a physical characteristic such as diameter, length, thickness, etc. is subjected to some variability or standard deviation, and is therefore reported as an average number. As the Examiner is certainly aware, there are different types of averages, including a “mean” average and a “median” average. Thus, the “mean layer thickness” is computed as the average of the individual thicknesses obtained from AFM and X-ray measurements as described in the examples.

As regards claim 10, the clause in question, as the Examiner seems to correctly understand, is intended to be alternative. An appropriate amendment has been made using classic Markush form, and indeed the language selected comes from the specification.

Withdrawal of the rejection is in order and is respectfully requested.

Some additional amendments have been made to place the claims in better form for U.S. practice. Thus, claims 13-15 have been amended to depend from claim 3 instead of claim 1. Claim 3 has been rewritten in independent form, consistent with the amendments made in claim 1.

Claims 6 and 9 have been indicated on page 9, paragraph 7 of the Official Action, to be directed to allowable subject matter if rewritten to overcome the §112 rejection. These claims have not been rejected over any prior art, and Applicants accordingly understand that they are deemed by the PTO to define novel and unobvious subject matter under §§102 and 103.

Claims 3-5, 10 and 13 have been rejected §102 as anticipated by Barber U.S. Patent No. 5,849,052. This rejection is respectfully traversed.

Applicants respectfully submit that there are numerous differences between Barber and the present invention, and consequently there is no embodiment disclosed in Barber which anticipates any of Applicants' claims. Thus, for a reference to be properly anticipatory under §102, the reference must disclose each and every element of the claimed invention, *Eli Lilly and Co. v. Zenith Goldline Pharms., Inc.*, 81 USPQ2d 1324, 1328 (Fed. Cir. 2006), and those elements must be "arranged or combined in the same way as in the claim," *Net MoneyIN Inc. v. VeriSign Inc.*, 88 USPQ2d 1751, 1759 (Fed. Cir. 2008), quoting from *Finisar Corp. v. DirecTV Group Inc.*, 86 USPQ2d 1609, 1618 (Fed. Cir. 2008).

Applicants respectfully invite the Examiner's attention to the recent precedential decision of the Board of Appeals in *Ex parte Frye*, 94 USPQ 2d 1072, 1076, decided by an expanded Board including Director Kappos, Deputy Director Barner, Chief Administrative Patent Judge Fleming, Vice Chief Administrative Patent Judge MacDonald and three additional administrative patent judges. Applicants do not see, even if it were correct that Barber discloses each and every element, that Barber shows those elements "arranged as in the claim." Applicants do not see that Barber discloses an embodiment corresponding to the claimed subject matter.

As regards the examined claims, Barber is directed towards and relates to a substantially different area of technology, in that Barber does not at all contemplate the provision of superhydrophobic coatings, which is a main aspect of the present invention. Instead, Barber forms an article of a polysiloxane binder and abrasive particles (Abstract). There are of course many, many alternatives within the body of the Barber patent, which sets forth a huge basket or shotgun approach, but Applicants do not see anything even broadly suggestive of, let alone anticipatory of, anything other than an abrasive bonded by a polysiloxane, the latter being a polymer having a molecular weight of "at least about 35,000 preferably at least 70,000, ... most preferably about 70,000 to 1,000,000." (Col. 4, lines 25-28)

This distinction even applies to Applicants' withdrawn claim 1. In contrast to Barber, who deals with a polysiloxane polymer, the present invention involves monomers for coating according to withdrawn claim 1. In the method, monomers are applied to a substrate (a surface) and are solidified to provide a coated substrate as called for in claim 3, desirably in filament form as called for in claims 4-8.

Applicants appreciate that the Examiner already recognizes that claims 6 and 9 define patentable subject matter over Barber.

Barber does not anticipate any of Applicants' claims. Withdrawal of the rejection is in order and is respectfully requested.

Claims 3-5, 7, 8, 10, 13 and 14 have been rejected under §102 as being anticipated by Ogawa U.S. Patent Application Publication 2001/0005531 (Ogawa). This rejection is respectfully traversed.

Ogawa discloses methods of forming a chemically adsorbed film on a substrate using a solution mixture of an alkoxy silane surface active agent, a **non-aqueous** solvent and a catalyst, resulting in covalently bonding the catalyst-induced coating to the substrate. As in Barber discussed above, Ogawa also has a huge basket or shotgun disclosure with many alternatives, but Applicants do not see any embodiment in Ogawa which anticipates any of Applicants' claims.

Even taking the broadest disclosure of Ogawa, and piecing together bits and pieces from the various Ogawa embodiments (not permissible for a rejection under §102), there still could not be any inherent anticipation because Ogawa uses a silanol condensing catalyst which requires a hydrogen-free, non-aqueous solvent, as noted above (also see paragraph [0007]) in which water is explicitly excluded. As a rejection based on inherency must be "reasonably certain," and as Applicants' claim 3 and the claims which depend therefrom result from a method performed in the presence of water under carefully controlled conditions, whereas water is excluded from the Ogawa method, it follows that the products must be different.

In support of this position, the contact angles reported in Ogawa are much less than the angles obtained in accordance with the present invention, which also indicates that the films of Ogawa and the coatings of the present invention must be different. In this regard, it should be noted that Ogawa is applying a surface active agent (a wetting agent), which logically would not provide a superhydrophobic coating as confirmed by the noted differences in the contact angles.

Ogawa does not anticipate any of Applicants' claims. Withdrawal of the rejection is in order and is respectfully requested.

Claims 3-5, 10 and 15 have been rejected under §102 as anticipated by Flugge U.S. Patent Application Publication 2004/0086727 (Flugge). This rejection is respectfully traversed.

Flugge appears to be even less material to the patentability of the present invention than are Barber and Ogawa. Again, there is no objective or intent to provide a superhydrophobic coating on a substrate. Instead, Flugge is directed to making soft tissue paper, namely facial tissue, bath tissue, paper towels, dinner napkins and the like (paragraph [0001]). This is accomplished according to Flugge (see especially paragraphs [0072] to [0079]) by applying a mixture of a polysiloxane and a compatible, water dispersible or water soluble synthetic resin binder to the tissue paper in a variety of ways.

As pointed out above, Applicants apply their material in monomeric form, contrary to Flugge which applies a polysiloxane (not to mention the water dispersible or water soluble synthetic resin binder). In spite of the many, many possibilities disclosed by Flugge, Applicants do not see any embodiments of Flugge which would anticipate any of Applicants' claims.

Clearly, no superhydrophobic coating according to the present invention could be achieved by following Flugge. Accordingly, Flugge does not anticipate any of Applicants' claims.

Withdrawal of the rejection is in order and is respectfully requested.

In re Appln of Jan Zimmermann et al  
Appln. No. 10/561,943  
Reply to Office Action of October 13, 2009  
Amendment dated April 13, 2010

During prosecution of the corresponding European patent application, some additional references have been brought to Applicants' attention. Applicants will file a formal Information Disclosure Statement (IDS) regarding these three new references, as soon as possible, but in the meantime they are identified below:

U.S. Patent Application Publication 2002/0064663

U.S. Patent No. 6,352,945

U.S. Patent No. 6,432,846


The prior art documents of record and not relied upon by the PTO have been noted, along with the implication that such documents are deemed by the PTO to be insufficiently material to warrant their application against any of Applicants' claims.

Applicants believe that all issues raised in the Official Action have been addressed above in a manner that should lead to patentability of the present application. Favorable consideration and early formal allowance are respectfully requested.

If the Examiner has any questions or suggestions, the Examiner is respectfully requested to contact the undersigned at (202) 628-5197.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.  
Attorneys for Applicants

By   
Sheridan Neimark  
Registration No. 20,520

SN:ltm

G:\BN\I\le\Zimmermann3\Pto\2010-04-12 AMD.doc

Telephone No.: (202) 628-5197

Facsimile No.: (202) 737-3528